

Docket No.: 0649-1070PUS1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Tatsuya IGARASHI et al.

Application No.: 10/530,289

Confirmation No.: 7753

Filed: April 5, 2005

Art Unit: 1794

For: ORGANIC ELECTROLUMINESCENT
DEVICE

Examiner: D. L. Garrett

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

I, Toshihiro Ise, declare and say as follows:

I am named as a co-inventor of the above-identified application.

I have carried out additional comparative testing myself or under my supervision. Test procedures and results are shown below.

Additional Comparative Testing

Additional Comparative Examples 55-108 were prepared under the same concentration conditions as Example 8. The results of Additional Comparative Examples 55-108 are shown in the attached Table. Additional Comparative Examples 1-54 are the same as the examples provided with the Rule 132 Declaration filed on August 11, 2008. These examples are repeated in the attached Table for convenience. Some combinations of host materials disclosed in U.S. Patent Application Publication No. 2002/0125818 to Sato et al. (hereinafter, "Sato '818") are not effective to show the many examples where no luminescence was available. These results are shown as "No light emission."

The present invention uses carbazole compound (A-10) and arylamine compound (C-10) as a hole transporting host; imidazole compounds (ET-1, ET-2), triazine compound (A-28), aromatic hydrocarbon compounds (C-18 and C-22), and aluminum complex compound (B-68) as an electron transporting host; and homoleptic iridium complex (G-1) and heteroleptic iridium complex (G-2) as a phosphorescent material. Thus, many compounds are shown to be effective without limitation for the structure. As further support, inventive Additional Examples 3-26 were conducted to provide examples where the luminescent material, hole transporting layer material, electron transporting layer material, and cathode are changed and where the combination and concentration of the hosts are changed. These results are also shown in the attached Table.

As is apparent from the results shown in the attached Table, the devices of the Additional Comparative Examples provide bad performance in operation durability and external quantum efficiency.

The data already of record in the specification and the supplemental data submitted herewith demonstrate superior results of the claimed organic electroluminescent device over those of the cited references:

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S. Code 1001 and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

By: Toshihiro Ise Date: Jun. 9, 2009
Dr. Toshihiro Ise

